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ABSTRACT

Ground Zero is an organization whose intent is to provide factual information on nuclear war issues. Ground Zero has published a simulation called "Firebreaks II: A War-Peace Game" about the ways nuclear war might be prevented. The impact of Firebreaks II on college students' attitudes was assessed in 79 student volunteers of whom 40 percent were male and 60 percent were female. The experiment used a four-group posttest only design with subjects randomly assigned to either one of the two treatment conditions, an active control condition, or a passive control condition. The first treatment subjects completed the Firebreaks simulation, the second viewed filmstrips on nuclear war issues, the active control subjects viewed filmstrips on family issues, and the passive control subjects received only the posttest. The results indicated that subjects who completed Firebreaks II did not report attitudes towards nuclear freeze and other conditions which were statistically different from the control group. Subjects who viewed the nuclear war issues filmstrip treatment did report attitudes more supportive of a nuclear freeze than did the other groups. (ABL)

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Nuclear War Media and Firebreaks II: An Experimental Study[1]

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[1]A paper presented at the annual meeting of the American Psychological Association, Los Angeles, CA, August 25, 1985

Running Head: Nuclear War Media

ABSTRACT

This investigation utilized a four-group posttest only design to assess the effects of Ground Zero's Firebreaks II simulation and selected nuclear war media on attitudes toward nuclear war. Subjects were introductory psychology students who completed the treatments in two, two hour sessions. One treatment group completed Firebreaks II simulation and the other viewed and discussed four slide-tape presentations dealing with nuclear issues. One control group viewed and discussed filmstrip-tape programs on the family and family violence and the other just took the posttest. The Firebreaks II simulation did not result in any differences from the control groups. The nuclear war media resulted in significantly lower readiness for the first use of nuclear weapons and a lowered perception of the advantages to either the U.S. or the Soviets to engage in one. The nuclear war media group also regarded a mutual verifiable nuclear freeze as more beneficial, wise and positive.

Nuclear War Media and Firebreaks II: An Experimental Study

Should a global nuclear war occur, the immediate devastation and the subsequent nuclear winter would certainly plunge this planet into what could be described as a holocaust of immense proportions. Given this potential scenario, it is not surprising that many Americans are concerned about the possibility of nuclear war (i.e., Escalona, 1982; Schwebel, 1982; Beardslee and Mack, 1983; Mayton, 1983; Kramer, Kalick and Milburn, 1983).

Numerous organizations have been formed since the development of the first atomic bomb in 1945 to help prevent a global nuclear war. One such organization, Ground Zero, was created in the early 1980's in direct response to the confusion and frustration the American people experience as they confront the possibility of a nuclear war between the Soviet Union and the United States (Ground Zero, 1982). As a non-partisan educational project, Ground Zero has developed nationwide, community-based discussions and events as well as other materials and programs responsive to the concerns of the American people regarding nuclear war. Ground Zero states that it does not as an organization nor do any of its educational materials advocate positions on policy questions but provides factual information with "a balanced representation of both sides of policy questions subject to varying analysis and interpretation (p. xii)."

In early 1984 Ground Zero published a simulation called Firebreaks II: A War-Peace Game to help high school students, college students as well as community, religious and other groups learn about the ways nuclear war might be prevented. This study was designed to assess the

impact of the Firebreaks II simulation on the attitudes of college students regarding selected nuclear war issues.

Other organizations have been established to impact on certain aspects of public policy regarding nuclear war issues. Many organizations have developed media presentations on nuclear war issues to further their causes. The Federation of American Scientists, founded in 1946 as a public interest lobby of scientists to help ensure civilian control of atomic energy and other nuclear issues, has funded the production of two slide-tape presentations entitled Under the Mushroom Cloud and STOP vs START. The Union of Concerned Scientists established in 1969 which focuses on nuclear power safety, national energy policy, and nuclear arms control had a slide-tape presentation entitled The Threat of Nuclear War developed. The Wilmington College Peace Resource Center has available the slide-tape presentation A-Bomb Survivors Recollect. The second purpose of this study was to determine the impact of these representative examples of nuclear war media when viewed together on the attitudes of college students regarding selected nuclear war issues.

METHOD

Subjects

Subjects were volunteer introductory psychology students from a small state-supported college. A total of 79 completed all phases of the experiment outside of class time and received partial credit toward their grade for participation. Forty percent of the subjects were males and 60% were females.

Procedure

This experimental investigation was a four-group posttest only design with 23 subjects randomly assigned to each of the two treatment conditions and the active control condition. Each group met twice for two hours during the same week and were posttested five days later the following week. A total of 23 volunteers were randomly assigned to the passive control condition which received only the posttest.

In the first treatment condition subjects completed the Firebreaks II full game simulation which is a discussion and role playing game designed to teach basic information about nuclear war in a non-political way. The participants play the role of the leaders and advisors to the leaders of the United States and the Soviet Union during a time of international crisis in the Middle East/Persian Gulf region. The scenario requires the particpants to make a series of crucial decisions in which they must protect their vital national interests and still try to prevent a nuclear war. Subjects in this treatment condition completed the orientation session and move one during the first two-hour session and the last two moves during the second two-hour session.

In the second treatment condition subjects viewed four slide-tape presentations with informal guided discussions of the issues after each presentation. During the first session the presentations A Bomb Survivors Recollect and The Threat of Nuclear War were viewed. During the second session the presentations Under the Mushroom Cloud and STOP vs START were viewed.

In the active control condition subjects viewed seven filmstrip-tape presentations produced by Sunburst Media dealing with how to cope with family changes and violence in the family. As with the nuclear war

media treatment condition each presentation was followed by informal guided discussions of the issues just raised in the filmstrip. During the first session presentations on redefining the family, single parent families and stepparents and blended families were viewed and discussed. During the second session presentations on the dynamics of family violence, child abuse and neglect, battered wives, and adolescent abuse were viewed and discussed.

Posttest Measures

The Modified World Affairs Questionnaire (MWAQ) analyzed and discussed by Mayton (1984) was administered to each subject during a separate posttesting and debriefing session. The summated scores of the eight components of the MWAQ served as the first set of dependent measures. The MWAQ component labels are (1) civil defense, (2) escalation, (3) destructiveness, (4) probability, (5) first strike, (6) survivability, (7) retaliation, and (8) impact on policy.

In addition to the MWAQ the 42-item questionnaire developed and analyzed by McClenney and Neiss (1984) was also administered. Five subscales based on Fishbein and Ajzen's (1975) model of the relationships between attitudes and behavior were part of this questionnaire. Three of these subscales regarding attitudes toward a nuclear freeze were included as dependent measures. These were behavioral beliefs, outcome evaluations, and intentions to act. Three other subscales measuring responses to the threat of nuclear war were (1) denial of threat, (2) control of threat, and (3) responsibility for social action. Thus a total of six dependent measures were utilized from the McClenney and Neiss (1984) questionnaire.

RESULTS

The fourteen dependent measures were analyzed using separate one-way analysis of variance procedures. Since the group sizes varied due to the failure of ten volunteers to attend the initial session and the failure of three subjects to complete the study once they started, the Bartlett-Box F test was utilized to assure homogeneity of variance. In all fourteen instances homogeneous variances were determined to exist at the .05 level.

Only one of the MWAQ variables resulted in an overall F value for the ANOVA which was significant at the .05 level. In terms of attitudes toward civil defense, the escalation of a nuclear war, the destructiveness of nuclear war, the probability of a nuclear war, the survivability of a nuclear war, the use of nuclear retaliation and the impact one could have on policy, the Firebreaks II group and the nuclear war media group did not differ from either the active or passive control groups or each other. For the attitude towards a first strike variable an overall F value of 6.89 was determined to be significant at the .001 level. Tukey's HSD procedure revealed that the nuclear war media group was significantly less likely to indicate a willingness to strike the Russians first and were less likely to think the Russians would if they thought they could suffer little loss to themselves than the other three groups at the .05 level. No significant differences were found between the Firebreaks II group, the active control group and the passive control group on this first strike variable.

One of the McClenney and Neiss (1984) questionnaire subscales resulted in an overall F value for the ANOVA which was significant at

the .05 level. For the outcome evaluation scale scores, the overall F value was 3.37. Tukey's HSD procedure revealed that the nuclear war media group held significantly more positive outcome evaluations regarding a nuclear freeze than the active control group at the .05 level. No other pairs of groups differed significantly on this variable. In terms of the behavioral beliefs regarding political actions intended to bring about a nuclear freeze, the intentions to support a freeze, the denial of the threat of nuclear war, control of the threat and the responsibility for social action attitude variables, the four groups did not differ at a statistically significant level.

DISCUSSION

Completion of the Firebreaks II simulation did not result in attitudes toward the nuclear freeze and other nuclear issues which were any different than the control conditions. College students who completed the simulation could not be distinguished statistically from those not exposed to any nuclear war presentations or discussions across any of the dependent measures. A lack of impact on policy matters such as the use of nuclear retaliation and the escalation of a nuclear war is noteworthy. Also of particular interest is the lack of impact on intentions to support a nuclear freeze and to take other political action on the issue of arms control. No evidence has been found to dispute Ground Zero's (1982) claim that it "does not advocate positions on policy questions, nor do any of its educational materials (p. xii)." Efforts by strong military defense advocates to discredit the value of the Firebreaks II simulation with accusations that it is propaganda

should look elsewhere for support of their claims.

One extraneous variable which was measured may temper these results. According to Fishbein and Ajzen's (1975) expectancy-value model, intentions to act or engage in a behavior are a function of an individual's attitude toward the act and his or her subjective norms concerning the behavior. No differences were found between the Firebreaks II group and the control groups in terms of attitudes toward the act which includes behavioral beliefs and outcome evaluations. There is no reason to believe that one's subjective norms or what a person thinks friends and significant others expect of them with regards to nuclear freeze activities would be modified by the treatments. However, differences between groups on subjective norms could negate potential differences on their intentions to act. Two subscales measuring subjective norms from the McClenney and Neiss (1984) questionnaire were analyzed using separate one-way ANOVAs after the test for homogeneity of variance assured this statistic's assumptions were not violated. For the normative beliefs subscale scores an overall F was significant at the .05 level. For the motivations to comply with these normative beliefs subscale the overall F was not statistically significant. Tukey's HSD procedure revealed that the Firebreaks II group held significantly less positive normative beliefs regarding the likelihood that significant others would support them in taking a pronuclear freeze stand than the passive control group at the .05 level. The same trend held for the active control group but the result was not significant. No other pairs of groups differed on this scale. Even though the groups did not differ in their motivations to comply with normative beliefs, the fact that random assignment inadvertently

created a group which went through the Firebreaks II simulation with less support from significant others to have them advocate a nuclear freeze may have reduced the impact to nonsignificant levels.

The nuclear war slide-tape presentations with informal guided discussions did change two important attitudes related to the nuclear threat. The college students with this exposure were more strongly against our use of a nuclear first strike and viewed the likelihood of the Soviet Union's engaging in one as significantly lower. The college students who viewed the nuclear war media also regarded a mutual verifiable nuclear freeze as more beneficial, wise and with positive consequences. While their intentions to act in support of a freeze or to take other political action on the issue of arms control were not modified, the change in attitudes toward the behavior is an important first step in the process of changing attitudes to effect changes in behavior.

The Firebreaks II simulation was presented in a way which would typify its usage at meetings of community groups organized to deal with arms control and nuclear issues both on and off college campuses. Used in this fashion, it appears unlikely that the attitudes of the uncommitted participant will be changed. The nuclear war slide-tape presentations were also presented in a manner typical of their usage in campus and community gatherings. If more profound attitude change and subsequent behavior change is to occur, the nuclear war media needs to be combined with follow-up presentations which include more than just informal discussions. Leventhal (1970) and Cook and Flay (1978) have reviewed the attitude change literature from which recommendations can be applied. Their reviews are particularly relevant to attitudes

toward the nuclear threat because of the fear and emotional arousal elicited by this issue. A systematic method is needed for incorporating self-relevant dilemmas to increase the individual's moral responsibility. Along with this, efficacious and specific recommendations to deal with the nuclear threat with behaviors that work to eliminate it need to be included. These methods will require a more sophisticated application of psychological principles into the media presentations themselves or into the follow-up activities outlined for media users. Social psychologists should not wait until midnight until they act in developing more effective attitude change strategies in this regard.

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